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ABSTRACT

For many years, foreign language teachers have used the computer to provide supplemental exercises in the instruction of foreign languages. In recent years, advances in computer technology have motivated teachers to reassess the computer and consider it a valuable part of daily foreign language learning. Innovative software programs, authoring capabilities, compact-disk technology, and elaborate computer networks are providing teachers with new methods of incorporating culture, grammar, and real language use in the classroom while students gain access to audio, visual, and textual information about the language and culture of its speakers. This digest provides specific information on computer-based foreign language programs; customizing, template, and authoring programs; computer networks; and compact-disk technology. A separate resource list contains addresses of where the computer programs cited in the text can be obtained. (VWL)

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ERIC Digest

Computer-Assisted Language Learning: Current Programs and Projects

Prepared by Chris Higgins, Gallaudet University

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ERIC CLEARINGHOUSE ON LANGUAGES AND LINGUISTICS
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Digest

April 1993

Computer-Assisted Language Learning: Current Programs and Projects

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For many years, foreign language teachers have used the computer to provide supplemental exercises. In recent years, advances in computer technology have motivated teachers to reassess the computer and consider it a valuable part of daily foreign language learning. Innovative software programs, authoring capabilities, compact disk technology, and elaborate computer networks are providing teachers with new methods of incorporating culture, grammar, and real language use in the classroom while students gain access to audio, visual, and textual information about the language and the culture of its speakers.

Computer-Based Foreign Language Programs

For many years, basic drill-and-practice software programs dominated the market in computer-assisted language learning (CALL). These programs focused on vocabulary or discrete grammar points. A vast array of drill-and-practice programs are still available; in addition, however, an increasing number of innovative and interactive programs are being developed. Simulation programs, while reinforcing grammar points, present students with real-life situations in which they learn about the culture of a country and the protocol for various situations. For example, the *Ticket* series by Bluelion Software and *Recuerdos de Madrid* from D.C. Heath are simulations that provide country-specific situations in a task-based format. *PC Globe* and encyclopedia-type programs are information programs that allow students to conduct research in the target language. Games such as the foreign language versions of *Where in the World Is Carmen Sandiego?* by Brøderbund Software or *Trivial Pursuit* from Gessler publishers provide an entertaining environment for students to learn culture and the target language through problem-solving and competition. Writing assistants, like *Salsa* and *Système-D* (Davis, 1992; Garrett, 1991) aid students in writing compositions in the target language by providing help in grammar, style, and verb conjugation and use (Willetts, in press).

Customizing, Template, and Authoring Programs

The greatest flexibility for teachers using CALL is in the area of authoring programs. Teachers can use these programs to create simple or elaborate software programs using their own materials. In this way, teachers are able to design the program to fit their own lesson plans (Garrett, 1991; Willetts, in press). Authoring programs range from simple template programs to more complicated authoring languages. Template programs, such as *Choicemaster* and *Storyboard* from Eurocentres Software, provide teachers with the basic structure for a program into which they put their own exercises. *Dasher* by Conduit Software, and *Calis*, developed at Duke University, provide more flexibility in creating exercises that allow teachers to work with screen design and different types of programs. Teachers have the most flexibility in program development and design in authoring systems such as *Toolbook*, by Asymetrix (Davis, 1992), and *Hypercard*, packaged with each Macintosh computer (Garrett, 1991), which allow multimedia capabilities as well as less complicated authoring possibilities.

Computer Networks

In addition to their individual programs, computers linked together in networks are expanding the way we teach and learn foreign languages. Local area networks (LAN) are computers linked together by cables in a classroom, lab, or building. They offer teachers a novel approach for creating new activities for students that provide more time and experience with the target language. Certain LAN setups allow students and teachers to correspond with each other via computer or to conduct collaborative writing activities in the target language. For example, LAN setups like the ENFI system at Gallaudet University provide an interactive mode of learning. Exercises on such a system enable students and teachers to communicate back and forth. Students can also engage in cooperative writing exercises, conversations in the target language, and problem-solving exercises. Teachers can observe students' activities and progress and make comments to individual students from a teacher station similar to that found in an audio lab (Peyton & Batson, 1986).

Expanding the unique capabilities of the LAN, long distance networks--or computers linked together across long distances--facilitate communication with students throughout the United States and abroad. Computers can communicate across thousands of miles via modems and phone lines using telecommunications software. Communication abroad allows for direct interaction with native speakers. For example, *Minitel*, a French commercial network service available in the United States, allows students to correspond in French with native speakers in France (Krause, 1989).

Compact Disk Technology

Compact disk technology has many uses in foreign language education, including information retrieval, interactive audio, and interactive multimedia programs. The compact disk - read only memory (CD-ROM) allows huge amounts of information to be stored on one disk with quick access to the information. Publishers have put complete encyclopedias, which could fill more than a dozen floppy disks, on one compact disk (CD). Students and teachers can access information quickly and efficiently for use in and out of the classroom. In recent years, many foreign language computer programs have been put on compact disks, eliminating the need for many floppy disks.

A new dimension has been added to many of these programs; digitized sound. Compact disks that use digitized sound offer quick random access to information as well as superior sound quality (Garrett, 1991). The Hyperglot company has put its programs on a CD that they call *Lingua ROM*. This software has a program disk and various language disks that contain the digitized speech. With such programs, students are able to hear the pronunciation of a phrase, a word, or even a syllable or sound and then record their own voice following the example. The students can then listen to the original recording, as well as their own, and compare the two. They can record their own voices again and compare the two until they feel their pronunciation has improved or is correct. While digitized sound is far superior to tape recorded sound, the space needed to store digitized sound is relatively large. However, continuing advances in CD-ROM technology will alleviate the space limitations (Garrett, 1991).

The most recent advance in CD technology is the development of the CD-I (compact disk - interactive). This technology includes digitized sound, compressed video, animation, and possibly text to create a multimedia platform for interactive programs. While this technology is still developing, the Phillips corporation has recently made the CD-I available on the commercial market. Because Sega Genesis has already put CD-I on the home video game market, the advent of CD-I educational technology has begun.

Conclusion

Technology has the potential to play a major role in foreign language learning and instruction. However, the development of this potential is in the early stages. Issues on which the realization of this potential depend include "the shift from thinking of technology as assisting instruction to thinking of it as supporting learning; the problems attending the evaluation of technology's efficacy; the prerequisites to genuine individualization of software; and the advantages and disadvantages of pedagogically shaped as contrasted with authentic materials and of learner control over the learning environment" (Garrett, 1991, p.95).

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Davis, R. C. (1992, March). Multimedia support for studies in foreign language and culture. *IBM Higher Education: Supplement to T.H.E. Journal*, 36-37.

Garrett, N. (1991). Technology in the service of language learning: Trends and issues. *Modern Language Journal, 75*, 74-101.

Krause, J. (1989). *Telecommunications in foreign language education: A resource list. ERIC Digest*. Washington, DC: ERIC Clearinghouse on Languages and Linguistics.

Peyton, J.K., & Batson, T. (1986). Computer networking: Making connections between speech and writing. *ERIC/CLL News Bulletin, 10*(1), 1-6.

Willetts, K. (in press). *Integrating technology into the foreign language curriculum: A teacher training manual*. Washington: Center for Applied Linguistics.

Programs and Projects Cited

Calis
DUCALL, Humanities Computing Facility, Duke University, 104 Languages Bldg., Duke University, Durham, NC 27706.

Choicemaster
Eurocentres, MBA, PO Box 7, Wetherby, Yorkshire LS23 7EP, England

Dasher Authoring System
Conduit Software, University of Iowa at Oakdale, Iowa City, IA 52242, (800) 365-9774

ENFI Project
Gallaudet University, HMB E230, Washington, DC 20002, (202) 651-5494

Hypercard Materials for Foreign Language Learning
Hyperglot Software, 505 Forest Hills Blvd., Knoxville, TN 37919, (800) 726-5087; 615-558-8270

Lingua ROM
Hyperglot Software, 505 Forest Hills Blvd., Knoxville, TN 37919, (800) 726-5087; 615-558-8270

Minitel
David Orton, Computer Unit, Harrogate College of Arts & Technology, Harrogate, North Yorkshire HG2 8 QT, England, (01144) 0423-879466

PC Globe
4700 South McClintock, Tempe, AZ, (602) 968-7194

Recuerdos de Madrid
D.C. Heath, 2700 North Richardt Avenue, POB 19309, Indianapolis, IN, 46219, (800) 334-3284.

Salsa
Interlex Associates Inc., P.O. Box 252, Ithaca, NY 14851, (607) 387-9688

Storyboard
Eurocentres, MBA, PO Box 7, Wetherby, Yorkshire LS23 7EP, England

Système-D
Heinle & Heinle, 20 Park Avenue, Boston, MA 02116, (800) 237-0053

Ticket to Paris, Ticket to Spain
Blue Lion Software, 90 Sherman Street, Cambridge, MA 02140, (800) 333-0199

Toolbook
Asymetrix Corp., Educational Programs, P.O. Box 40419, Belleview, WA 98004-1419, (800) 624-8999 ext. 299A

Trivial Pursuit (in French, German, and Spanish)
Gessler, 55 West 13th Street, New York, NY 10011, (800) 456-5825.

Where in the World Is Carmen Sandiego?
Brøderbund Software, POB 12947, San Rafael, CA 94913-2947, (800) 521-6263.

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